Introduction

Established in 1814, the Faculty of Medicine at the University of Oslo is the country's oldest faculty of medicine. The Faculty's teaching and research extends over a large area and has a clear international profile.

The doctoral training at the Faculty of Medicine is organized as an educational programme. At the same time, it is an important contribution to research through the candidates’ thesis work. The research training takes place in active research environments and/or research schools. Prospective PhD candidates will find an overview of research environments offering doctoral training by consulting faculty and institute web pages in their field of interest.

The overall strategy of our PhD-programme is to:

- recruit excellent candidates within medicine and health research
- offer high quality supervision and research training
- create a stimulating and creative learning environment
- educate candidates who are highly skilled within research, education and development work
- educate candidates who are demanded for positions within research, education and development

It is our ambition that your years as a PhD candidate at the Faculty of Medicine will prepare you for your future career, whether it will be in or outside academia.

With my best wishes for your years at the Faculty of Medicine

Frode Vartdal      Hilde Nebb
Dean                  Deputy Dean of Research
About the handbook

The purpose of this handbook is to provide important information regarding the doctoral course at the Faculty of Medicine. The handbook is primarily intended for prospective and current PhD candidates, but it will also be useful for supervisors, members of evaluation committees and others who are interested in our PhD programme.

The handbook is based on the "Regulations for the degree Philosophiae Doctor (PhD) at the University of Oslo" from 22 June 2010 and Supplementary Regulations for the degree Philosophiae Doctor (PhD) from 25 June 2013.

While this handbook provides an overview of the whole PhD course, more detailed information will be available at: www.med.uio.no/english/research/phd

Links to relevant documents and forms are also given at the end of each section of the handbook.

If you are employed as a research fellow, you have both an employment relationship to the Faculty of Medicine or another employer and a student relationship to the Faculty of Medicine. This handbook only contains information concerning the student relationship and the PhD programme. For information on the rules and guidelines that apply to employment at UiO we refer to the UiO internal personnel handbook (Norwegian): www.uio.no/for-ansatte/arbeidsstotte/personal/intern-personalhandbok

Admission and funding

In order to become eligible for admission to the PhD programme, you must be able to document a minimum of one year’s funding. This must cover both living costs and funding of the research project. You must also submit a realistic plan for funding of the remaining period. This could be realized through a university fellowship or a scholarship from an external funding source. It is a precondition that a minimum of 50% of working hours can be devoted to the doctoral training.
You should have completed a Master’s degree or have an equivalent educational background and your average grade should be no less than B (B on the master thesis). International students must document their English language skills. In addition, a project description that only covers the applicant’s specific PhD project must be enclosed with the application.

Every candidate must have at least two supervisors in order to be admitted to the PhD programme. All supervisors must have a doctoral degree or equivalent academic competence.

**Resources**

Application requirements: [www.med.uio.no/english/research/phd/application](http://www.med.uio.no/english/research/phd/application)

Applying for a research fellowship: [www.jobbnorge.no](http://www.jobbnorge.no)

Quota scholarships: [www.uio.no/english/studies/admission/quota-scheme/phd.html](http://www.uio.no/english/studies/admission/quota-scheme/phd.html)

Information to international PhD candidates: [www.uio.no/english/studies/contact/international-student-reception.html](http://www.uio.no/english/studies/contact/international-student-reception.html)

**Expected learning outcomes**

Doctoral training aims to qualify the PhD candidates for research activities and other kinds of work requiring a high level of scientific insight. In addition to conducting independent research, the doctoral candidate shall acquire advanced theoretical and methodological competence and general academic skills in accordance with the Norwegian Qualifications Framework.

Supervisors, PhD courses, research groups and research schools are responsible for strengthening general and transferable skills and offering tailored training that meet the needs of PhD candidates.

After successfully completing the PhD programme the candidates should have acquired the following knowledge, skills and competences:
Knowledge
The programme will give you knowledge about:

- The knowledge status and needs within your own field of research nationally and internationally
- The diversity of research approaches and research methods relevant to medical and health research
- Standards for quality research within your own field and within medical and health research in general
- Strengths and weaknesses of your own research methods and methodological challenges within your own field
- The foundation of science and principles of knowledge acquisition in medical and health research
- Ethical dilemmas and principles within medical research including the Health Research Act and other relevant legislation
- Principles for convergence and interdisciplinary in medical and health research
- Forms and principles of research innovation

Skills
The programme will provide you with skills to:

- Demonstrate original, independent and critical thinking in your research
- Identify and develop innovative research questions
- Keep up to date on research in your field
- Participate in academic discussions nationally and internationally, for instance through participation in workshops, seminars and conferences
- Read and critically assess the breadth of medical research literature in medical and health research
- Discuss, select and apply relevant research methods to answer a research question
- Reflect on and discuss the strengths and weaknesses of your own research methods and results
- Reflect on and discuss ethical and epistemological dilemmas in research
- Apply national and international principles and rules of ethics, including the Health Research Act
- Publish articles in internationally recognized journals within your field
- Disseminate research finding to non-scientists and the public
- Draw on interdisciplinary knowledge and expertise when approaching complex research questions

**General competence**

The programme will give the student a general competence to:

- Receive and utilize supervision
- Work in multidisciplinary teams with complex research questions
- Use databases and information and communication technology-based research tools
- Participate in the organization and management of meetings, conferences and seminars
- Work in a structured and independent manner in order to reach your objectives
- Gain an overview of and acquire advanced knowledge
- Develop innovative and critical thinking
- Express yourself clearly and concisely both orally and in writing
- Analyse, evaluate and communicate your own strengths and weaknesses
- Develop your knowledge, competencies and skills continuously and purposefully
- Provide constructive and critical feedback on others' academic work
- Build and manage professional networks
- Constructively contribute to a good working and learning environment

**Resources**

The Norwegian Qualification Framework (NQF):


**Supervision**

PhD candidates are assigned a main supervisor and one or more co-supervisors. The supervisors’ research qualifications must cover the necessary research fields in such a way that the group as a whole has competence in all research aspects of the PhD
candidate’s research project. In collaboration with the PhD candidate, the supervisors will draw up the project description and support the PhD candidate throughout the doctoral training period. The supervisors have a particular responsibility for ensuring that the PhD candidate is trained to develop as a researcher with high ethical standards, and to avoid all research misconduct. In addition, supervisors are responsible for including the PhD candidate in the academic community as a colleague of the research group. The candidate and his/her supervisor will have regular contact and keep each other informed of all matters of importance for the completion of the PhD programme.

**Rights and Obligations of the parties**

**The supervisor is to:**

- Make a plan for the PhD course based on the project description and the candidate’s knowledge needs
- Give advice on the definition and limitation of the subject and research topic
- Discuss and evaluate hypotheses and methods
- Help the candidate with orientation in the academic literature and data (library, archives etc.)
- Discuss concepts and presentation (the outline, linguistic form, documentation etc.)
- Keep up to date with the candidate’s progress and evaluate this the progress with reference to the work plan
- Assist in introducing the candidate to relevant scientific communities
- Discuss results and their interpretation
- Give the candidate supervision in questions of research ethics related to research in general, publishing data, and writing the thesis, including ethical approval from the Regional Committee for Medical and Health Research Ethics (REK), Data Protection Official (NSD) for human samples/interventions or the Norwegian Food Safety Authority and the Norwegian Animal Research Authority (research involving animals).
- Obtain all necessary permits and concessions for the research
- Organize annual appraisals with the candidate
- Organize the midterm evaluation of the candidate
The doctoral candidate is to:

- To carry out your research effectively, to a high standard and within the prescribed period of study
- To attend PhD events at the university, faculty and institute and to attend the courses agreed with your main supervisor
- To agree and strictly abide by a timetable for regular contact with the main supervisor, at least once a month, and for the submission of your written work
- Give the supervisor reports or drafts of parts of the dissertation and submit your written work by agreed deadlines to allow sufficient time for comment and discussion
- Throughout the work, live up to the principles of research ethics which apply to the subject area
- Obtain the necessary permits, concessions, recommendations, etc., related to the research on which the dissertation is based
- Deliver the semester report, participate in the annual appraisals and in the midterm evaluation

Ethical approval

Research projects covered by the Health Research Act or animal research regulations must be approved in advance by the Regional Committee for Medical and Health Research Ethics (REK) or the Norwegian Food Safety Authority. This concerns all projects which intend to generate new knowledge about health and disease. All candidates must along with their supervisors consider whether their project requires an approval from REK. If the project requires an approval, a full application must be submitted. If there is doubt whether approval is necessary REK must be asked for an preliminary assessment.

Other projects treating participant/personal data must have ethical approval from the Protection Officer (Personvernombudet) at the hospital or the Data Protection Official for Research (NSD).
**Semester report**

The candidate should submit reports every semester on the progress of the research. This reporting is done in the StudentWeb. The report should indicate the progress of the research and the educational component. Any significant deviation from the original time schedule or other particular aspects should be specified. The system for progress reports are as of August 2014 under revision, a new system will be implemented during autumn 2015.

**Mid-term evaluation**

All PhD candidates will undergo a mid-term evaluation after fifteen months, but not later than eighteen months after admission. It is the responsibility of the main supervisor to organize the mid-term evaluation and to appoint an evaluating committee (1-2 persons, internal or external) that will evaluate the progress and scientific development of the project.

Three weeks prior to the evaluation the candidate should send the following to the committee/evaluator:

- a short report on a standardized scheme
- a maximum of 20 pages from selected manuscripts in preparation
- the original PhD project plan

In addition the candidate should prepare a presentation showing achieved results and explain any deviations from project plan. The duration of the presentation should be about 15 minutes.

After the candidate’s presentation there will be a 45 minutes discussion with the evaluator/evaluating committee. Topics for the discussion are: Progress according to project plan, evaluation of the hypothesis, chosen methods, preliminary results, presentation of results, coherence in the work and possible suggestions for adjustments. This discussion is open to the supervisor and an audience.

The evaluation ends with a closed talk between the committee/evaluator and the candidate without the supervisor present.
The total time frame for the midterm evaluation is 90 minutes.

The mid-term evaluation will be implemented during autumn 2015.

Resources

Supervision: [www.med.uio.no/english/research/phd/supervision](http://www.med.uio.no/english/research/phd/supervision)

Contract for the change of supervisors:
[www.med.uio.no/english/research/phd/forms/candidate/contract-change-supervisor.pdf](http://www.med.uio.no/english/research/phd/forms/candidate/contract-change-supervisor.pdf)

Extensions: [www.med.uio.no/english/research/phd](http://www.med.uio.no/english/research/phd)

REK approval: [https://helseforskning.etikkom.no/ikbViewer/page/forside?_ikbLanguageCode=us](https://helseforskning.etikkom.no/ikbViewer/page/forside?_ikbLanguageCode=us)


Training component

The training component consists of minimum 30 credits (ECTS). This must be completed and approved before candidates may submit the thesis for evaluation. All activities included in the training component must be of a high scientific standard and provide a sufficient amount of breadth and depth in the scientific field. It is recommended that the training component be completed during the first half of the PhD study period.

The training component consists of a mandatory part and an elective part.

Mandatory component

The mandatory courses will prepare the candidates for complex and interdisciplinary problem solving through a general medical education.

There are two mandatory introductory (INTRO) courses, INTRO I and INTRO II. INTRO I should be attended during the first semester and addresses fundamental questions in research such as ethics and the philosophy of science as well as different
research designs and methods. The course also provides an overview of various research traditions within the medical field, including molecular and cellular biology, clinical research, and health service research. In addition, the course demonstrates the importance of convergence by showing how the different methods and traditions are complementary when they are used together to approach a concrete research case: obesity.

INTRO II is held in the third semester of the PhD programme. The main objective is to provide participants relevant practical skills related to scientific medical writing, writing for the public and media, as well as presentation skills, including poster presentations. Other topics include the concept of innovation and the defence.

**Elective component**

The elective part of the research training component consists of a minimum of 20 credits, of which 15 credits must consist of PhD courses completed at a Norwegian or international institution. The training component should be planned in consultation with the supervisor(s).

**Research Schools**

The aim of the Research Schools is to offer courses and seminars for PhD candidates and create a dynamic and committed professional and social community. To be eligible, you must be admitted to a PhD programme. Research Schools offer courses that can be included in the elective part of the doctoral training. The Research Schools allow students to specialize in a particular subject area. They also provide the opportunity for network building and collaboration with other candidates with similar research interests.

**Research schools administrated by the Faculty of medicine, UiO**

- The National Research School in General Practice (NAFALM)
- The National Research School in Cardiovascular Medicine (Norheart)

**Research schools that faculty collaborate with**

- National Research School in Medical Imaging - NTNU
• National Research School in Neuroscience (NRSN) - NTNU
• National Research School in Population Based Epidemiology – UiT

The Medical Student Research Programme

The Medical Student Research Programme (MSR) is an optional programme for medical students at the University of Oslo who want to perform research during their medical studies.

MedDocs

MedDocs is a network for the PhD Candidates at the faculty and is organized in PhD forums for each institute. The PhD forums aim to create dialogue and collaboration between the PhD Candidates and organize seminars which supplement the faculty’s courses. The MedDocs and the PhD forums also work to develop the doctoral training through an active dialogue with the faculty and the institutes.

Resources

PhD courses: www.med.uio.no/english/research/phd/courses

Research schools: www.med.uio.no/english/research/phd/schools

The National Research School in General Practice (NAFALM): www.med.uio.no/helsam/english/research/doctoral-degree/schools/nafalm

The National Research School in Cardiovascular Medicine (Norheart): norheart.no

Medical student research programme: www.med.uio.no/english/research/student-research-programme

PhD forum: www.med.uio.no/english/research/phd/phd-forum

Head of Postgraduate Studies

All three Institutes at the Faculty of Medicine have a Head of Postgraduate Studies in a permanent academic position with responsibility for the PhD programme

Specific tasks for the Head of Postgraduate Studies:
• Help to assure the quality of admission into the PhD programme
• Coordinate the research training at the institute
• Contribute to the development of the research training at the Faculty of Medicine in collaboration with the faculty management (Dean of Research)
• Develop strategic documents and participate at meetings concerning the research training
• Constitute an academic contact locally for both PhD candidates and supervisors


**Thesis requirements**

A thesis for a PhD degree should consist of at least three scientific articles published in or drafted for assessment by international journals with peer reviews. At least one of the papers must be published. Normally, it is required that candidates are first authors of at least two articles.

In addition to individual articles, the thesis must contain an overall presentation of the scientific results with a thorough comparative discussion. This overall presentation must be an independent scientific document in which the candidate has the opportunity to elaborate and discuss aspects of the articles. The presentation should provide:

- A reasoned presentation of the research questions
- An account of the methods
- A summary of the papers
- A discussion of the findings in the light of previous research. The discussion should demonstrate self-critical abilities, especially with respect to the interpretation and discussion of the data

Monographs that are not published can also be accepted as a dissertation for the Ph.D. degree. These will be judged by the same criteria as a collection of published articles.

The thesis should in its entirety be written either in English or in Norwegian.

**Resources**

Forskningshåndboken (The Research Handbook) is collaboration between researchers at Oslo University Hospital and Haukeland University Hospital, detailing the basics of
Clinical research, publishing and writing. The 6th edition of the Research Handbook is currently only available in Norwegian:

www.oslo-universitetssykehus.no/omoss_/avdelinger_/kvinne-og-barneklinikken_/forskning_/forskningshandboken_/norsk_/Sider/side.aspx

The 4th edition in English:

www.oslo-universitetssykehus.no/omoss_/avdelinger_/kvinne-og-barneklinikken_/forskning_/forskningshandboken_/engelsk_/Sider/side.aspx

Completion

After submission, the thesis is evaluated by an expert evaluation committee consisting of two opponents and one UiO administrator. If approved, the thesis will be defended by discussing the research findings with the opponents at a public defence. A successful defence results in the conferring of a PhD degree, and the diploma is presented at a formal doctoral promotion ceremony.

The doctoral degree (PhD) is awarded on the basis of:

- An approved doctoral thesis and satisfactory public defence,
- Approved completion of the training component, and
- An approved trial lecture on a topic set by an evaluation committee

The trial lecture

When the dean has approved the thesis for public defence, the candidate must hold a trial lecture on a topic set by the evaluation committee before the defence. The candidate will be notified of the subject by e-mail ten working days before the trial lecture. The trial lecture will be led by the acting dean, and last for 45 minutes. Up to 15 minutes can be allowed for questions and comments after the trial lecture. During the trial lecture, the candidate must demonstrate ability to convey complex knowledge to a wider audience. The target group for the trial lecture is students, colleagues without specialist knowledge. The trial lecture will be held in English, but may also be held in Norwegian if the acting dean deems this appropriate.

The defence (disputation)

The defence lasts for 2–3 hours, and is led by the acting dean.
The acting dean will open the defence by making a brief presentation of the candidate and committee, before the candidate makes a 15-minute summary of his/her research aimed at the general public. The first opponent will then discuss with the candidate (stipulated to take less than 75 minutes). The second opponent thereafter discusses with the candidate (stipulated to take less than 45 minutes). The candidate will finish the defence by briefly thanking the university and the committee. The acting dean will thereafter declare that the defence is concluded.

**Conferral**

The University of Oslo holds formal ceremonies four times a year to present PhD diplomas to the candidates that pass the disputation.

**Resources**

Submission: [www.med.uio.no/english/research/phd/thesis-evaluation/submission/how-to-submit-your-thesis](http://www.med.uio.no/english/research/phd/thesis-evaluation/submission/how-to-submit-your-thesis)

Evaluation: [www.med.uio.no/english/research/phd/thesis-evaluation/evaluation](http://www.med.uio.no/english/research/phd/thesis-evaluation/evaluation)

Trial lecture and disputation: [www.med.uio.no/english/research/phd/thesis-evaluation/trial-lecture-defence](http://www.med.uio.no/english/research/phd/thesis-evaluation/trial-lecture-defence)

Printing: [www.med.uio.no/english/research/phd/thesis-evaluation/submission/printing](http://www.med.uio.no/english/research/phd/thesis-evaluation/submission/printing)

Doctoral dinner: [www.med.uio.no/english/research/phd/thesis-evaluation/doctoral-dinner](http://www.med.uio.no/english/research/phd/thesis-evaluation/doctoral-dinner)